

**WE CLAIM:**

1        1. A waveform customization method for a signal generator, comprising:  
2                retrieving a waveform and at least one code associated with said waveform  
3                from a storage media;  
4                retrieving at least one key associated with said signal generator;  
5                comparing said at least one code associated with said waveform and said at  
6                least one key; and  
7                downloading said waveform to said signal generator under condition that said  
8                at least one code matches said at least one key.

1        2. The method of Claim 1, further comprising:  
2                bundling said waveform and said at least one code associated with said  
3                waveform into a file; and  
4                storing said file containing said waveform and said at least one code associated  
5                with said waveform in said storage media.

1           3. The method of Claim 2, further comprising:  
2                 providing one or more parameters that characterize said waveform; and  
3                 creating said waveform based on said one or more parameters.

1           4. The method of Claim 3, further comprising:  
2                 providing one or more signal generator settings;  
3                 bundling said one or more signal generator settings with said waveform and  
4                 said at least one code; and  
5                 configuring said signal generator using said one more signal generator settings.

1           5. The method of Claim 4, wherein said steps of providing further comprises:  
2                 entering at least one of said one or more parameters and said one or more  
3                 signal generator settings by a user into a computer that creates said waveform.

1           6. The method of Claim 5, wherein said step of providing said one or more signal  
2                 generator settings further comprises:  
3                 pre-configuring said one or more signal generator settings; and  
4                 storing said one or more pre-configured signal generator settings on said  
5                 computer.

1           7.     The method of Claim 2, wherein said file is encrypted, and further comprising:  
2               decrypting said file after said step of retrieving said waveform.

1           8.     The method of Claim 1, wherein said step of retrieving said at least one key  
2     further comprises:

3               retrieving said at least one key from said signal generator, said at least one key  
4     being stored within said signal generator.

1           9.     The method of Claim 1, wherein said waveform is a signal modulated to  
2     conform to one of a plurality of communication formats, said signal generator being capable of  
3     downloading and transmitting signals modulated to conform to any of the plurality of  
4     communication formats, each of the plurality of communication formats having a different one  
5     of said at least one code associated therewith.

1           10.    The method of Claim 1, further comprising:  
2               requesting said waveform be downloaded to said signal generator by an  
3     automatic test equipment system.

1           11.     The method of Claim 10, further comprising:  
2                 requesting an additional waveform be downloaded to an additional signal  
3     generator by said automatic test equipment system.

1           12.     The method of Claim 11, wherein said additional waveform is stored within an  
2     additional storage media.

1           13.     A system customizing at least one waveform of a signal generator, comprising:  
2                 a storage media adapted to store a waveform and at least one code associated  
3     with said waveform; and  
4                 a download application configured to retrieve said waveform and at least one  
5     key associated with said signal generator, compare said at least one code associated with said  
6     waveform and said at least one key and download said waveform to said signal generator  
7     under condition that said at least one code matches said at least one key.,

1           14. The system of Claim 13, further comprising:

2           a signal generation application configured to bundle said waveform and said at  
3 least one code associated with said waveform into a file and store said file in said storage  
4 media.

1           15. The system of Claim 14, wherein said signal generation application is further

2 configured to encrypt said file prior to storing said file in said storage media, said download  
3 application being further configured to decrypt said file.

1           16. The system of Claim 14, wherein said signal generation application is further

2 configured to receive as input one or more parameters that characterize said waveform and  
3 create said waveform based on said one or more parameters.

1           17. The system of Claim 16, wherein said signal generation application is further

2 configured to provide one or more signal generator settings and bundle said one or more  
3 signal generator settings with said waveform and said at least one code, said download  
4 application being further configured to use said one or more signal generator settings to  
5 configure said signal generator.

1           18. The method of Claim 17, further comprising:  
2                 a computer having at least said signal generation application therein, said signal  
3             generation application further having an interface capable of receiving at least one of said one  
4             or more parameters and said one or more signal generator settings from a user of said  
5             computer.

1           19. The system of Claim 18, wherein said one or more signal generator settings are  
2             pre-configured and stored on said computer.

1           20. The system of Claim 18, wherein said computer further has said storage media  
2             and said download application therein.

1           21. The system of Claim 18, further comprising an additional computer having at  
2             least said download application therein.

1           22. The system of Claim 21, wherein said computer is operatively connected to  
2             said additional computer.

1           23. The system of Claim 22, wherein said computer is connected to said additional  
2             computer via a data network.

1           24. The system of Claim 13, wherein said at least one key is stored on said signal  
2       generator.

1           25. The system of Claim 13, wherein said waveform is a signal modulated to  
2       conform to one of a plurality of communication formats, said signal generator being capable of  
3       downloading and transmitting signals modulated to conform to any of the plurality of  
4       communication formats, each of the plurality of communication formats having a different one  
5       of said at least one code associated therewith.

1           26. The system of Claim 13, further comprising:  
2              an automatic test equipment system adapted to request said download  
3       application to download said waveform to said signal generator.

1           27. The system of Claim 26, wherein said automatic test equipment system is  
2       further configured to request an additional waveform be downloaded to an additional signal  
3       generator.

1           28. The system of Claim 27, further comprising:  
2              an additional storage media, said additional waveform being stored within said  
3       additional storage media.